

## User's Manual



## YCS 100 Composite Video and S-video Transcoder

68-495-10 Rev. A  
06 06



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# Precautions

## Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

### Caution

**Read Instructions** • Read and understand all safety and operating instructions before using the equipment.

**Retain Instructions** • The safety instructions should be kept for future reference.

**Follow Warnings** • Follow all warnings and instructions marked on the equipment or in the user information.

**Avoid Attachments** • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

## Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

### Attention

**Lire les instructions** • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.

**Conservier les instructions** • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.

**Respecter les avertissements** • Observer tous les avertissements et consignes marqués sur le matériel ou présents dans la documentation utilisateur.

**Éviter les pièces de fixation** • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

## Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

### Achtung

**Lesen der Anleitungen** • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.

**Aufbewahren der Anleitungen** • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.

**Befolgen der Warnhinweise** • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.

**Keine Zusatzgeräte** • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

## Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

### Precaución

**Leer las instrucciones** • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.

**Conservar las instrucciones** • Conservar las instrucciones de seguridad para futura consulta.

**Obedecer las advertencias** • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.

**Evitar el uso de accesorios** • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

### Warning

**Power sources** • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

**Power disconnection** • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

**Power cord protection** • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.

**Servicing** • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

**Slots and openings** • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.

**Lithium battery** • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

### Avvertissement

**Alimentations** • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de la contourner ni de la désactiver.

**Déconnexion de l'alimentation** • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.

**Protection du cordon d'alimentation** • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas écrasés ou pincés par des objets.

**Réparation-maintenance** • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.

**Fentes et orifices** • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.

**Lithium Batterie** • Il a danger d'explosion s'il y a un remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

### Vorsicht

**Stromquellen** • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluss, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.

**Stromunterbrechung** • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.

**Schutz des Netzkabels** • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegen gestellt werden können.

**Wartung** • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder andere Gefahren bestehen.

**Schlitze und Öffnungen** • Wenn das Gerät Schlitze oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Inneren. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.

**Lithium-Batterie** • Explosionsgefahr, falls die Batterie nicht richtig ersetzt wird. Ersetzen Sie verbrauchte Batterien nur durch den gleichen oder einen vergleichbaren Batterietyp, der auch vom Hersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien bitte gemäß den Herstelleranweisungen.

### Advertencia

**Alimentación eléctrica** • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución general con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearla ni eliminarla.

**Desconexión de alimentación eléctrica** • Para desconectar con seguridad la acometida de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.

**Protección del cables de alimentación** • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.

**Reparaciones/mantenimiento** • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario deba acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.

**Ranuras y aberturas** • Si el equipo posee ranuras o orificios en su caja/alojamiento, es para evitar el sobrecalentamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.

**Batería de litio** • Existe riesgo de explosión si esta batería se coloca en la posición incorrecta. Cambiar esta batería únicamente con el mismo tipo (o su equivalente) recomendado por el fabricante. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

# FCC Class A Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Note: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

# Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

**USA, Canada, South America, and Central America:**  
Extron Electronics  
1001 East Ball Road  
Anaheim, CA 92805, USA

**Europe, Africa, and the Middle East:**  
Extron Electronics, Europe  
Beeldschermweg 6C  
3821 AH Amersfoort  
The Netherlands

**Asia:**  
Extron Electronics, Asia  
135 Joo Seng Road, #04-01  
PM Industrial Bldg.  
Singapore 368363

**Japan:**  
Extron Electronics, Japan  
Kyodo Building  
16 Ichibancho  
Chiyoda-ku, Tokyo 102-0082  
Japan

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

*If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.*

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

## 安全须知 • 中文



这个符号提示用户该设备用户手册中有重要的操作和维护说明。



这个符号警告用户该设备机壳内有露的危险电压，有触电危险。

## 注意

**阅读说明书** • 用户使用该设备前必须阅读并理解所有安全和使用说明。

**保存说明书** • 用户应保存安全说明书以备将来使用。

**遵守警告** • 用户应遵守产品和用户指南上的所有安全和操作说明。

**避免追加** • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

## 警告

**电源** • 该设备只能使用产品上标明的电源。设备必须使用有地线的供电系统供电。第三条线（地线）是安全设施，不能不用或跳过。

**拔掉电源** • 为安全地从设备拔掉电源，请拔掉所有设备后或桌面电源的电源线，或任何接到市电系统的电源线。

**电源线保护** • 妥善布线，避免被踩踏，或重物挤压。

**维护** • 所有维修必须由认证的维修人员进行。设备内部没有用户可以更换的零件。为避免出现触电危险不要自己试图打开设备盖子维修该设备。

**通风孔** • 有些设备机壳上有通风槽或孔，它们是用来防止机内敏感元件过热。不要用任何东西挡住通风孔。

**锂电池** • 不正确的更换电池会有爆炸的危险。必须使用与厂家推荐的相同或相近型号的电池。按照生产厂的建议处理废弃电池。

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# 1 Chapter One

## **Introduction**

About this Manual

About the YCS 100

Features

Application Diagram

# Introduction

## About this Manual

This manual contains information about the Extron YCS 100 Transcoder, and discusses how to install, configure, and operate it.

The terms “YCS 100,” “YCS,” and “transcoder” are used interchangeably throughout this manual.

## About the YCS 100

The Extron YCS 100 Transcoder has a composite video to S-video (luminance [Y] and chrominance [C]) decoder and an S-video to composite video encoder in one product. The high performance digital decoder has a time base stabilizer that corrects the jitter from VCR signals. A 5-line adaptive comb filter performs the Y/C separation, virtually eliminating chroma noise. Each input has its own individually buffered loop-through signal.

The transcoder is compatible with NTSC 3.58, NTSC 4.43, SECAM, and PAL standards.

## Features

**Digital decoding and analog encoding** — The YCS 100 digitally decodes (separates) the composite video input signal into Y and C for S-video. It provides analog encoding (combining) of the Y and C signals of S-video input into composite video.

**Time base stabilizer** — The time base stabilizer (TBS) stabilizes the video signal in the time domain. This results in a significantly more stable image on the screen and better recording quality from input sources with unstable video signals, such as consumer VCRs and worn or multi-generation VHS tapes.

**Input connectors** — The decoder has one composite video input on a female BNC connector. The decoder input is buffered and looped through, also on a female BNC connector.

The encoder has one S-video input on 4-pin mini DIN connectors. The encoder input is buffered and looped through, also on a 4-pin mini DIN connector.

**Output connectors** — The decoder has one S-video output on a 4-pin mini DIN connector. The encoder has one composite video output on a BNC connector.

**Quad standard compatibility** — The digital quad standard decoder and encoder provide for universal compatibility.

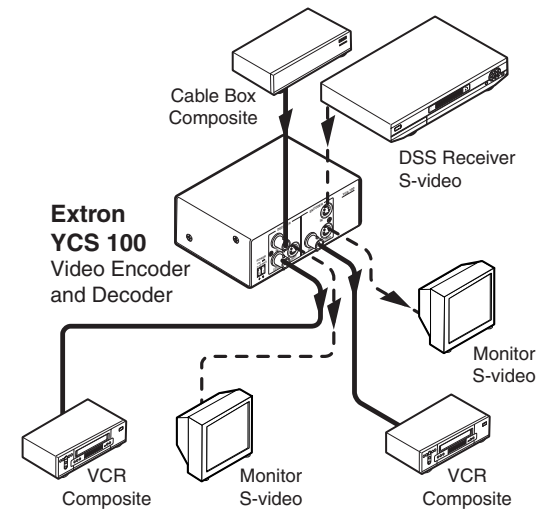
**Enclosure** — The YCS 100 has a compact 1U high, ¼-rack wide, 3 inches deep Versatools® metal enclosure that can be easily placed or mounted in a variety of locations.

**Power supply** — An external 12 VDC power supply with a two-pin captive screw connector accepts 100 to 240 VAC. The power supply input has single diode polarity protection.

**Rack, furniture, and projector mounting** — The YCS 100 can be mounted on a rack shelf, under a desk or podium, or on a projector pole, with an optional mounting kit.

## Application Diagram

The following diagram provides an example of how the YCS 100 may be connected.



**Figure 1-1 — YCS 100 connection diagram**



# Chapter Two

## Installation and Operation

Installation Overview

Mounting the YCS 100

Rear Panel

Wiring the Power Connector

Front Panel

Operation

Troubleshooting

# Installation and Operation

## Installation Overview

To install and set up the YCS 100, follow these steps:

- 1 Mount the YCS 100 on a rack shelf, furniture, or projector bracket if desired.
- 2 Connect your input and output devices to the YCS 100's rear panel connectors.
- 3 Wire the provided 2-pin captive screw connector to the external power supply. (See *Wiring the Power Connector*, later in this chapter.)
- 4 Apply power to the YCS 100 and to the input and output devices.

## Mounting the YCS 100

The YCS 100 can be set on a table; mounted on a rack shelf; mounted under a desk, podium, or table; or attached to a projector with one of the Extron projector mounting kits.

### Tabletop use

Four self-adhesive rubber feet are included with the YCS 100. For tabletop use, attach one foot at each corner on the bottom of the unit, and place the YCS in the desired location.

### Rack mounting

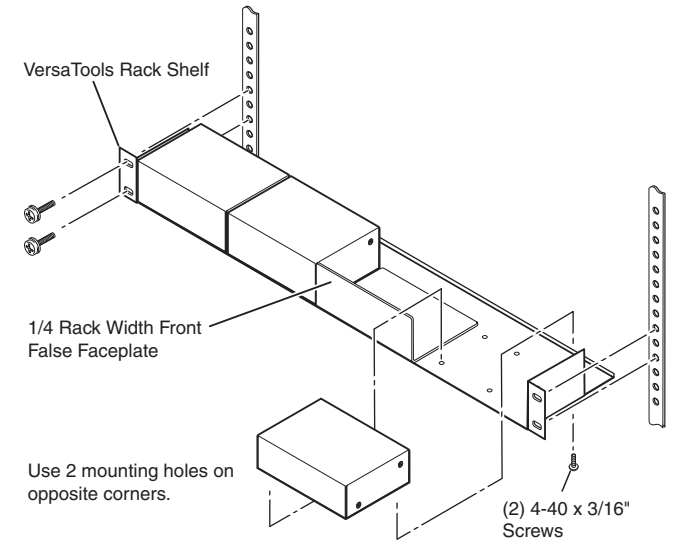
For optional rack mounting, do not install the rubber feet. Mount the transcoder on one of the following rack shelves:

- **1U 3.5" Deep VersaTools® rack shelf**  
Standard (RSF 123, part #60-190-20) or Basic (RSB 123, part #60-604-20)
- **1U 9.5" Deep rack shelf**  
Universal (RSU 129, part #60-190-01) or Basic (RSB 129, part #60-604-01)
- **1U 6" Deep Rack Shelf**  
Universal (RSU 126, part #60-190-10) or Basic (RSB 126, part #60-604-10)

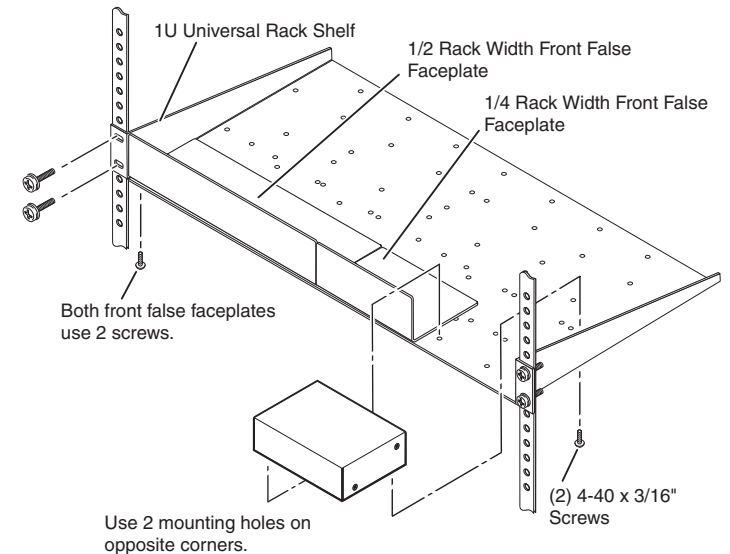
### Mounting on a rack shelf

1. If feet were previously attached to the bottom of the YCS, remove them.
2. Mount the YCS 100 on the rack shelf, using two 4-40 x 3/16" screws in opposite (diagonal) corners to secure the unit to the shelf (see figures 2-1 and 2-2, on the next page, or figure 2-3 on page 2-4).

3. Install blank panel(s) or other unit(s) on the rack shelf as desired.

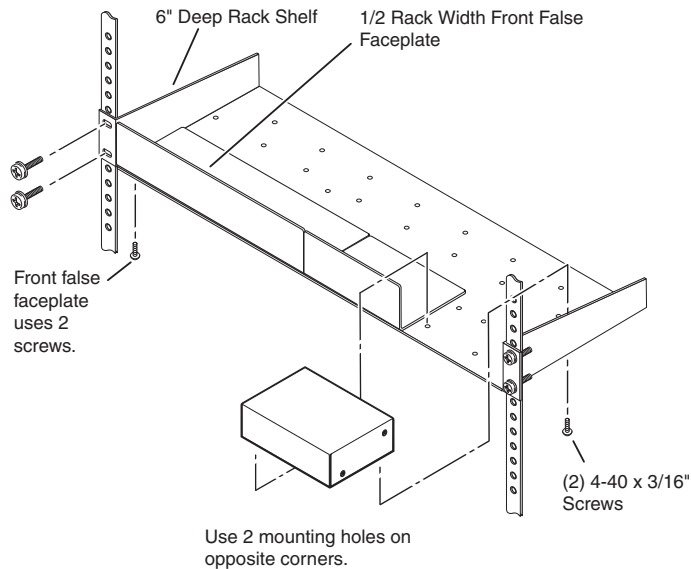


**Figure 2-1 — Mounting a YCS 100 (with other units) on a VersaTools rack shelf**



**Figure 2-2 — Mounting a YCS 100 on a standard rack shelf**





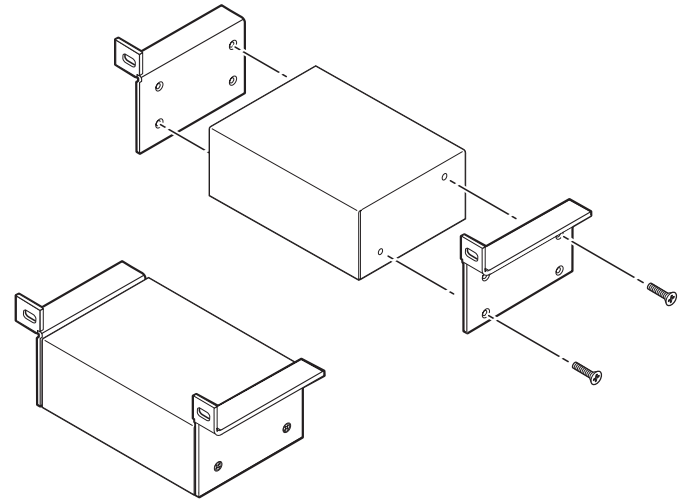
**Figure 2-3 — Mounting a YCS on a 6-inch rack shelf**

### Back of the rack mounting

The YCS 100 also can be mounted vertically to the front or rear rack supports, using the optional MBB 100 back of the rack mounting kit (Extron part #70-367-01).

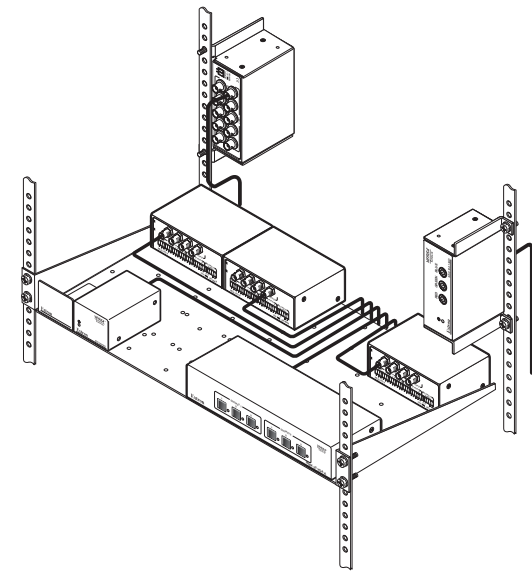
Follow these steps to mount the YCS to the rack supports using the back of the rack mounting kit:

1. If feet were previously attached to the bottom of the YCS, remove them.
2. Remove the two screws from one side of the YCS. Retain the screws for possible later reassembly.
3. Attach one bracket to the side of the unit, using the longer screws included in the mounting kit (see figure 2-4, on the next page).
4. Repeat steps 2 and 3 on the other side of the YCS.



**Figure 2-4 — Attaching the back of rack mounting brackets to the YCS 100**

5. Mount the unit to the rack support, using the two included rack screws (see figure 2-5, below).

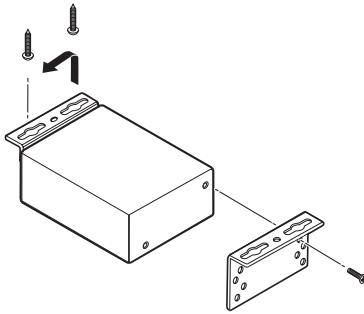


**Figure 2-5 — Mounting the YCS 100 to a back rack support**

### Furniture mounting

To furniture-mount the YCS 100, use the optional MBU 123 VersaTools under-desk mounting kit (part #70-212-01), as follows.

1. If rubber feet were previously attached to the bottom of the unit, remove them.
2. Remove the two screws from one side of the YCS. Retain the screws for possible later reassembly.
3. Attach one bracket to the side of the unit, using the provided machine screws (see figure 2-6, below).



**Figure 2-6 — Preparing the YCS 100 for under-desk mounting**

4. Repeat steps 2 and 3 on the other side of the YCS.
5. Hold the unit with the attached brackets against the underside of the table or other furniture. On the mounting surface, mark the location of the bracket's screw holes.
6. Drill 3/32" (2 mm) diameter pilot holes, 1/4" (6.3 mm) deep in the mounting surface at the marked screw locations.
7. Insert #8 wood screws into the four pilot holes. Tighten each screw into the mounting surface until slightly less than 1/4" of the screw head protrudes.
8. Align the mounting screws with the slots in the brackets and place the unit against the surface, with the screws through the bracket slots.
9. Slide the unit slightly forward or back, then tighten all four screws to secure it in place.

### Projector mounting

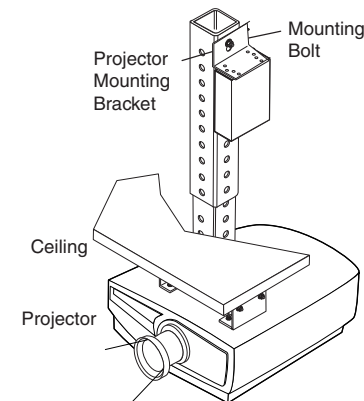
To projector-mount the YCS 100, use one of the three optional mounting kits described in the following sections.

#### Using the PMK 100 Mini Projector Mount Kit

The PMK 100 is a projector mounting kit (part # 70-217-01) designed for use with Extron 1U high, quarter-rack width products like the VersaTools products. It allows them to be mounted near or on a projector support.

Follow these steps to projector-mount the YCS 100 using the PMK 100 kit:

1. If rubber feet were previously attached to the bottom of the unit, remove them.
2. Remove the two screws from one side of the YCS. Retain the screws for possible later reassembly.
3. Attach the projector mounting bracket to the side of the unit, using the provided machine screws.



**Figure 2-7 — Projector-mounting the YCS 100 using the PMK 100 Projector Mount kit**

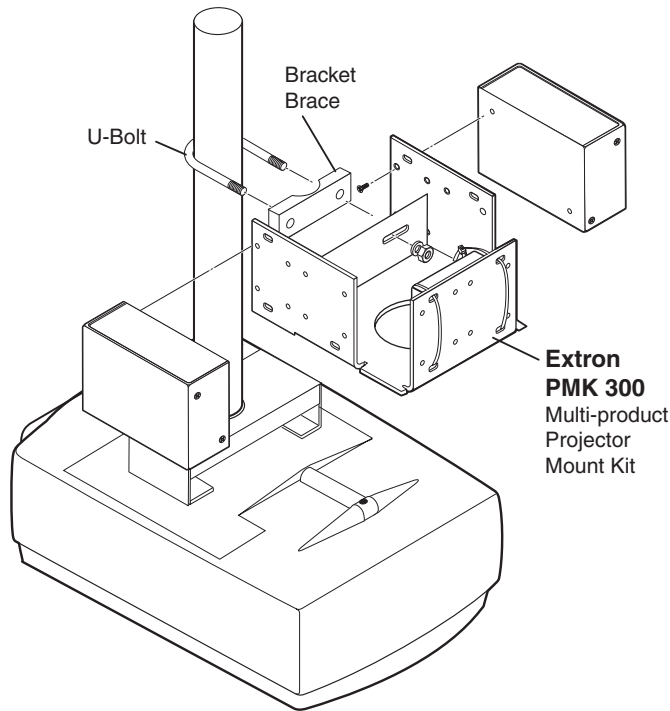
4. Secure the unit to a projector mount or other surface by inserting the mounting bolt through the bracket's slotted hole.

### Using the PMK 300 Projector Mount Kit

The PMK 300 Multi-Product Projector Mount Kit (#70-374-01) mounts up to three quarter-rack width products to a projector ceiling mount pole. The YCS 100 can be mounted above the display device with the front panel facing either down or up. The quarter rack width plate can also be used to mount the YCS external desktop power supply.

Follow these steps to projector-mount the YCS 100 using the PMK 300:

1. If necessary, remove the feet from the bottom of the YCS.
2. Mount the YCS to one of the bracket's three mounting plates. It can be vertically mounted facing either up or down, whichever you prefer. See figure 2-8, below.



**Figure 2-8 — Projector-mounting the YCS 100 using the PMK 300 Projector Mount Kit**

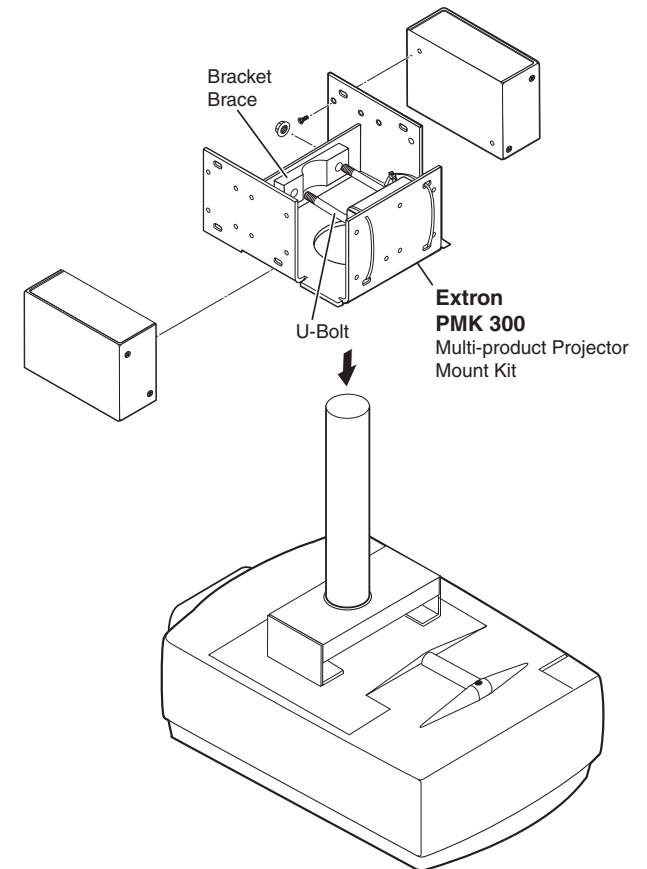
- On the side mounting plates, the YCS is typically mounted on the outside of the bracket.  
On the front mounting plate, the device is typically mounted on the inside of the bracket.

- For the YCS 100 unit, use two of the supplied 4-40 x 3/16" screws in opposite (diagonal) corners to secure the device to the bracket.

For the YCS power supply, use the two included tie wraps to strap the power supply to the bracket.

#### NOTE

The PMK 300 has a hole in the bottom plate that allows the projector pole to be inserted through the center of the plate, rather than outside of the plate (see figure 2-9, below). To install the PMK 300 in this configuration, slide the bracket up from the bottom of the pole before the projector is installed on the pole.



**Figure 2-9 — Projector-mounting the YCS 100 using the PMK 300 with the projector pole passing through the center**

## Installation and Operation, cont'd

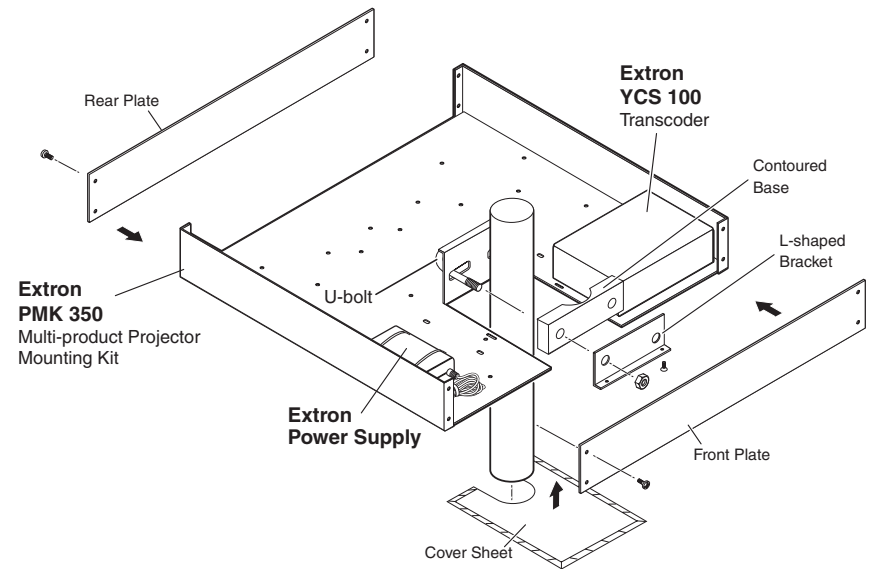
- Affix the supplied rubber pad to the side of the U-bolt clamping plate that the projector pole contacts.
- Place the U-bolt around the ceiling pole and insert the two legs of the U-bolt through the slotted holes on the bracket's mounting plate, then through the round holes on the backing brace.
  - **For a typical (1.5" to 2.0" diameter) pole** — You can use the supplied square U-bolt, which fits a typical ceiling pole.
  - **For a smaller or larger pole** — Locally obtain a square U-bolt that fits your ceiling pole. The slotted holes on the bracket can accommodate a square U-bolt for pole sizes from 1.0" to 2.5" in diameter.
- Secure the bracket to the U-bolt with the included hex nuts, washers, and lock washers. Tighten the hex nuts just enough that they can be loosened by hand.

### Using the PMK 350 Projector Mount Kit

The PMK 350 Low Profile Projector Mount Kit is an above-projector mounting kit that attaches to a 1" to 2" diameter projector mounting pole. It can hold more than one device, in a variety of sizes. The PMK 350 is available in black (part #70-563-02) or white (part #70-563-03).

Follow these steps to mount the YCS 100 on the PMK 350 bracket as follows:

- Remove the front and back panels from the PMK 350, using an Extron Tweaker or other small Philips screwdriver. (Retain the screws to reattach the plates when you are finished.)
- Remove any rubber feet from the bottom of the YCS 100.
- Secure the YCS to one side of the mounting bracket, using two of the supplied 4-40 x 3/16" screws in opposite (diagonal) corners.
- Using the two included tie wraps, strap the YCS power supply to the PMK 350 bracket.
- Place the bracket around the projector ceiling mounting pole as shown in figure 2-10.
- Place the rubberized contoured base against the pole and opposite the back plate. The pole should fit snugly into the depression in the center of the contoured base.



**Figure 2-10 — Projector-mounting the YCS 100 using the PMK 350 Projector Mount Kit**

- Align the two slotted holes in the bottom of the L-shaped bracket with the two slotted holes in the base of the PMK 350, on either side of the opening for the pole. Attach the L-bracket to the base by inserting two provided 6-32 x 5/16" screws through the aligned slots.
- Insert the two legs of the provided square U-bolt through the following parts in the order they are listed below:
  - The slotted holes on the back side of the bracket mount plate
  - The round holes in the rubberized contour base
  - The round holes in the L-shaped bracket
  - **For a typical (1.5" to 2.0" diameter) pole** — You can use the supplied square U-bolt, which fits a typical ceiling pole.
  - **For a smaller pole** — Locally obtain a square U-bolt that fits your ceiling pole. The slotted holes on the bracket can accommodate a square U-bolt for pole sizes from 1.0" to 2.0" in diameter.
- Move the PMK 350 up to the desired location on the ceiling pole, as close to the ceiling as desired.

- Secure the L-shaped bracket to the square U-bolt using the included hex nuts, washers, and lock washers. Tighten the hex nuts securely.

**NOTE** Be sure to tighten the hex nuts securely enough that the PMK 350 does not slide down the ceiling pole. A socket wrench is recommended to tighten the hex nuts.

- Secure the front panel to the mounting tray with four of the included #6 screws.
- If desired, choose one of the provided four sizes of self-adhesive cover sheets, and apply it to the underside of the mounting tray.

### Rear Panel

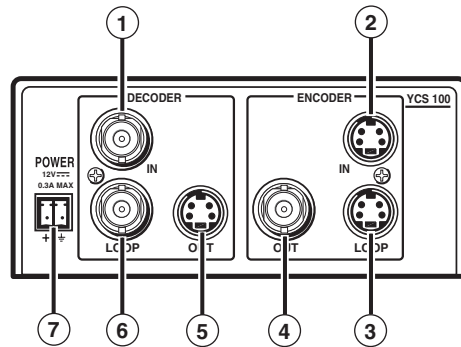


Figure 2-11 — YCS 100 rear panel

The YCS 100 rear panel contains the following features:

- Input composite video connector (decoder)** — Connect a composite video input source to this BNC connector.
- Input S-video connector (encoder)** — Connect an S-video input source to this 4-pin mini-DIN connector.
- S-video loop-through connector (encoder)** — Connect a monitor or other device to this 4-pin mini-DIN loop-through connector.
- Composite video output connector (encoder)** — Connect a composite video display device to this BNC connector.
- S-video output connector (decoder)** — Connect an S-video display device to this female 4-pin mini-DIN connector.
- Composite video loop-through connector (decoder)** — Connect a monitor or other device to this BNC loop-through connector.

- Power connector** — Plug the external 12 VDC power supply into this 2-pin, 3.5 mm captive screw connector.

### Wiring the Power Connector

To wire the connector for the external power supply,

- Cut the DC output cord to the length needed.
- Strip the jacket to expose 0.2 inches (5 mm) of the conductors.

**CAUTION** Exposing more than 0.2" (5 mm) of the copper wires could allow the stripped wires to touch each other, causing a short circuit. This could result in the external DC power supply overheating and/or burning.

Stripping the wires to expose less than the recommended amount may cause them to slide out of the connector too easily, even if they are tightly pinched by the captive screws.

- Slide the leads into the supplied 2-pin captive screw plug and secure them, using an Extron Tweezer or other small screwdriver.
- Use the supplied tie wrap to strap the power cord to the extended tail of the connector.
- To verify the power cord's polarity before connecting it, plug in the power supply with no load and check the output with a voltmeter.

Figure 2-12 shows how to wire the connector.

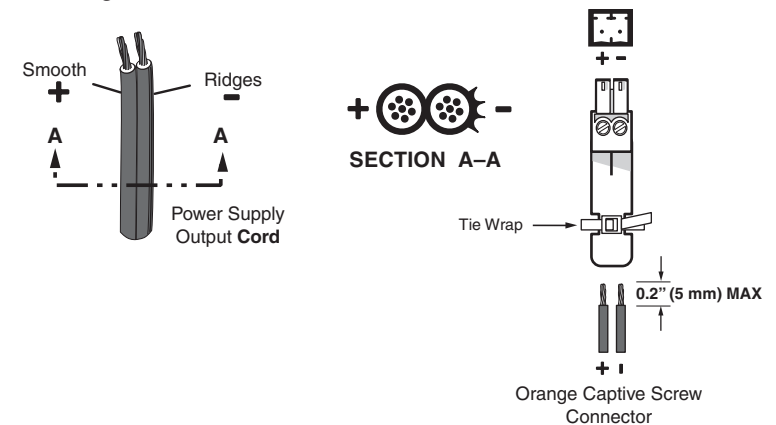


Figure 2-12 — Power connector wiring

## Installation and Operation, cont'd

**NOTE** Your YCS may have been shipped with a blue captive screw connector. This blue connector can be plugged into either a blue or an orange power receptacle.

The blue connector does not have the extended tail or the included tie-wrap.

**CAUTION** Do not tin the stripped power supply leads before attaching the captive screw plug to them. Tinned wires are not as secure in the captive screw connectors and can be easily pulled out. They may also break after being bent several times.

### Front Panel



**Figure 2-13 — YCS 100 front panel**

The YCS 100 front panel contains the following:

- 1 **Power LED indicator** — This green LED lights when the YCS 100 is receiving power.

### Operation

When the transcoder, input sources, and display devices are powered up, the system is fully operational. During YCS 100 operation, one or both of the following takes place:

- The YCS 100 digital decoder accepts a composite video signal and separates it into Y (luma) and C (chroma), converting the signal to output S-video, while also passing an unconverted signal to a composite video monitor attached to the video loop-through BNC connector.
- The YCS 100 analog encoder accepts an S-video signal and converts it to composite video while also passing an unconverted signal to an S-video monitor connected to the S-video mini DIN loop-through connector.

If problems are encountered, ensure that all cables are routed and connected properly.

## Troubleshooting

Possible problems and their solutions include the following:

### Problem: No power at unit

**Solution:** Verify that the unit is receiving power by checking the front panel LED. If the LED is not lit, check the DC power plug termination and polarity.

### Problem: No video input

**Solution:** Verify that the source and output devices are powered on and connected properly.

### Problem: Black and white image flashes or scrolls rapidly

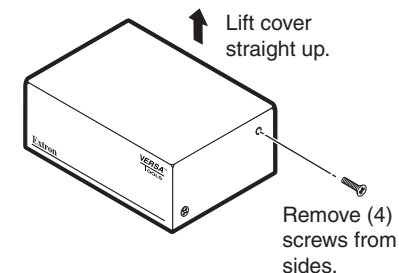
**Cause:** When a black and white signal is used without a colorburst signal, the output image may not sync correctly, causing continual flashing and rapid scrolling of the black and white image.

**Solution:** Close (enable) the jumper located at CR8 on the YCS 100 internal board. This corrects the black and white picture settings for NTSC and PAL standards.

**NOTE** When you are not using a black and white signal, set the jumper back to the open position (the default).

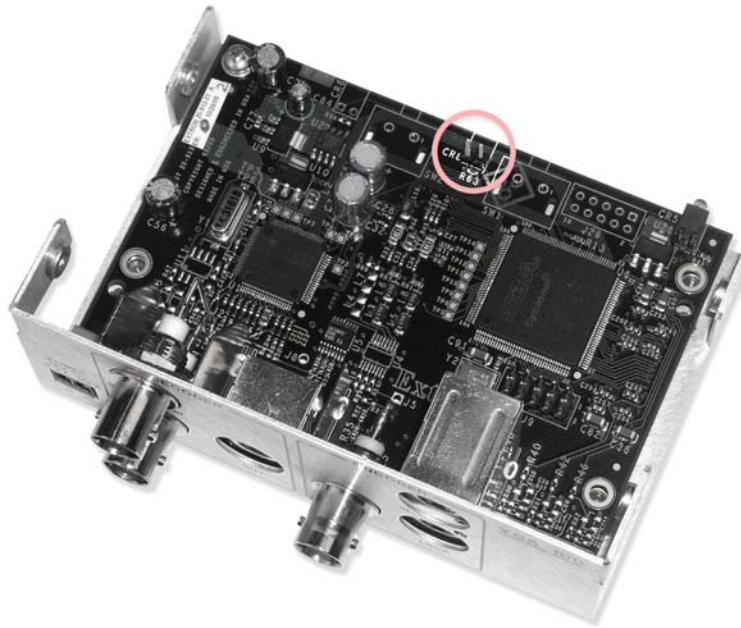
Follow these steps to enable the jumper:

1. Disconnect all power to the YCS and any attached devices. If the YCS is mounted, remove it from its mounting.
2. Remove the YCS cover by removing the two screws on each side and lifting the cover up and off.



**Figure 2-14 — Removing the cover of the YCS 100**

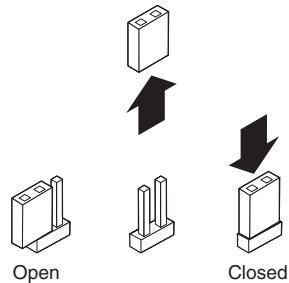
3. Locate the two-pronged CR8 jumper near the center back of the YCS board. (See the photograph below.)



**Figure 2-15 — Jumper on YCS 100 internal board**

**NOTE** When the YCS is delivered from the factory, a shunt is attached to one prong of the jumper. This shunt is used to enable the jumper in step 4.

4. Enable (close) the CR8 jumper by placing the shunt on both prongs, as shown below.



**Figure 2-16 — Enabling the CR8 jumper**

5. Replace the YCS cover, using the screws that you removed.
6. Connect and power on all attached devices, then power on the YCS 100.

# Appendix A

## Specifications, Part Numbers, and Accessories

Specifications

Included Parts

Accessories

# Specifications, Part Numbers, and Accessories

## Specifications

**NOTE** The YCS 100 includes a built-in S-video decoder and a composite video encoder. The encoder portion and the decoder portion are independent and may be used simultaneously.

### Video — encoder portion

Gain ..... Unity  
Standards..... NTSC 3.58, NTSC 4.43, PAL (B, G, H, I, D, N, M), SECAM (B, G, H, D, K, K1, L); autodetected

### Video input and loop-through — encoder portion

Number/signal type..... 1 S-video, 1 S-video loop-through  
Connectors ..... 1 female 4-pin mini DIN (input), 1 female 4-pin mini DIN (loop-through)  
Nominal level ..... 1 Vp-p for Y of S-video (including sync)  
0.3 Vp-p for C of S-video  
Minimum/maximum levels..... Analog: 0.3 V to 1.5 Vp-p for Y with no offset at unity gain  
Impedance ..... 75 ohms  
Return loss ..... -27 dB for Y, -31 dB for C @ 5 MHz  
Input coupling ..... AC coupled

### Video processing— encoder portion

Signal processing type..... Analog encoding

### Video output — encoder portion

Number/signal type..... 1 composite video  
Connectors ..... 1 female BNC for composite video  
Nominal level ..... 1 Vp-p for composite video  
Minimum/maximum levels..... 0.3 V to 1.5 Vp-p for composite video, follows input  
Impedance ..... 75 ohms  
Return loss ..... -40 dB @ 3.58 MHz  
DC offset ..... ±300 mV with input at 0 offset

### Video input and loop-through — decoder portion

Number/signal type..... 1 composite video input, 1 composite video loop-through  
Connectors ..... 1 female BNC (input), 1 female BNC (loop-through)

Nominal level ..... 1 Vp-p for composite video (including sync)  
Minimum/maximum levels..... Analog: 0.3 V to 1.5 Vp-p for composite video with no offset at unity gain  
Impedance ..... 75 ohms  
Return loss ..... -34 dB for composite video @ 5 MHz  
Input coupling ..... Decoder input: AC coupled  
Loop-through input: DC coupled

### Video — decoder portion

Gain ..... Unity  
Standards..... NTSC 3.58, NTSC 4.43, PAL (B, G, H, I, D, N), SECAM (B, G, H, D, K, K1, L); autodetected

### Video processing — decoder portion

Signal processing type..... Digital decoding  
Digital sampling..... 10 bits per color, 30 bits total; 14.3 MHz sampling frequency  
Colors..... 1 billion  
Decoder type..... Adaptive 2D, 5-line digital comb filter

### Video output — decoder portion

Number/signal type..... 1 S-video  
Connectors ..... 2 female BNC and/or 1 female 4-pin mini DIN for S-video  
Nominal level ..... 1 Vp-p for Y of S-video (including sync)  
0.3 Vp-p for C of S-video  
Minimum/maximum levels..... 0.3 V to 1.5 Vp-p for Y, follows input  
Impedance ..... 75 ohms  
Return loss ..... -40 dB @ 3.58 MHz  
DC offset ..... Y: ±300 mV with input at 0 offset  
C: ±600 mV

### General

External power supply ..... 100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, 1 A max., regulated  
Power input requirements ..... 12 VDC, 0.3 A  
Temperature/humidity ..... Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing  
Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing



## Specifications, Part Numbers, Accessories, cont'd

Rack mount .....	Yes, with optional 1U rack shelf, part #60-190-01 or 60-604-01; 1U, 6" deep rack shelf, part #60-190-10 or 60-604-10; or VersaTools® rack shelf, part #60-190-20 or 60-604-20. Above-projector mountable with the optional PMK 100 Mini Projector Mount Kit (#70-217-01), the PMK 300 Multi-Product Projector Mount Kit (#70-374-01), or the PMK 350 Low Profile Projector Mount Kit (#70-563-03).
Enclosure type .....	Metal
Enclosure dimensions .....	1.7" H x 4.3" W x 3.0" D (1U high, quarter rack wide) 4.3 cm H x 10.9 cm W x 7.6 cm D (Depth excludes connectors.)
Product weight .....	0.4 lbs (0.2 kg)
Shipping weight .....	3 lbs (2 kg)
Vibration .....	ISTA 1A in carton (International Safe Transit Association)
Listings.....	UL, CUL
Compliances.....	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF.....	30,000 hours
Warranty .....	3 years parts and labor

**NOTE** All nominal levels are at ±10%.

**NOTE** Specifications are subject to change without notice.

## Included Parts

These items are included in each order for a YCS 100:

Included parts	Part numbers to reorder
YCS 100 transcoder	60-323-10
12 VDC, 1A external power supply with U. S. style power cord	70-055-01
2-pin captive screw power plug	
YCS 100 User's Manual	
Rubber feet, self-adhesive (4, not attached)	
Tweaker (small screwdriver)	

## Accessories

These items are optional and may be ordered separately:

Accessories	Part numbers
RSU 129 1U 9.5" Deep Universal rack shelf	60-190-01
RSB 129 1U 9.5" Deep Basic rack shelf	60-604-01
RSU 126 1U 6" Deep Universal rack shelf	60-190-10
RSB 126 1U 6" Deep Basic rack shelf	60-604-10
RSF 123 1U 3.5" Deep VersaTools® rack shelf	60-190-20
RSB 123 1U 3.5" Deep VersaTools® rack shelf	60-604-20
MBB 100 Back of the rack mounting kit	70-367-01
MBU 123 Under-desk mounting bracket kit	70-212-01
PMK 100 Mini Projector Mounting Kit	70-217-01
PMK 300 Multi-Product Projector Mounting Kit	70-374-01
PMK 350 Low Profile Projector Mounting Kit	70-563-02, -03
Mini HR cables	26-260-xx
S-video cables	26-316-xx
S-video adapters: SVHSM-BNCF, 8" (0.2 m)	26-353-01

## **Specifications, Part Numbers, Accessories, cont'd**